

CLAIMS

- 5
- 10
- 15
- 20
- 25
- 30
- 35
1. Portable electronic device (10) comprising:
a first part (12) including electrical circuits and having an exterior side (30), an interior side (24), and top and bottom (20) sides,
a second part (14) also including electrical circuits and also having an exterior side (16), an interior side (22) and top and bottom (18) sides,
at least one hinge (36) connecting the bottom sides of the first and second parts to each other and allowing rotation of one part in relation to the other, and
at least one first set (32, 34) of flexible electrical conductors connected to the first part (12) at the exterior side (30) adjacent the bottom side (20) thereof and to the second part (14) at the interior side (22) adjacent the bottom side (18) thereof.
 2. Portable electronic device according to claim 1, wherein the hinge allows rotation of one part with approximately 360 degrees in relation to the other part.
 3. Portable electronic device according to claim 1 or 2, wherein the first set of electrical conductors (32) stretches round the bottom side (20) of the first part (12) when the device is folded.
 4. Portable electronic device according to claim 3, wherein the first set of flexible electrical conductors (32) stretches round the bottom side (18) of the second part (14) when a part is rotated with approximately 360 degrees in relation to the other part.
 5. Portable electronic device according to any previous claim, wherein the set of conductors are essentially provided at right angles to both the bottom sides.
 6. Portable electronic device according to any previous claim, wherein the first set of flexible electrical conductors is separate from the hinge structure of the device.
 7. Portable electronic device according to any previous claim, further including a second set of flexible electrical conductors connected to the second part (14) at the exterior side (16) adjacent the bottom side (18) thereof and to the first part (12) at the interior side (24) adjacent the bottom side (20) thereof.

- 5
8. Portable electronic device according to claim 7, wherein the second set of flexible electrical conductors stretch round the bottom side of the second part when the device is folded.
9. Portable electronic device according to any previous claim, wherein both the bottom sides have a rounded shape.
- 10
10. Portable electronic device according to any previous claim, wherein both the bottom sides are provided with at least one groove for receiving a set of flexible electrical conductors.
- 15
11. Portable electronic device according to any previous claim, wherein one of the parts is provided with gears (38) at its bottom side and the other part is provided with gaps (40), with which the gears mesh.
- 20
12. Portable electronic device according to any previous claim, wherein the at least one hinge (36) is in the form of a plate comprising two sections each defining an axis of rotation displaced from the other in the plane of the plate and each section has a protrusion (46) on both sides in the middle of an area defining the axis.
- 25
13. Portable electronic device according to claim 12, wherein each part is provided with a slit (43) for receiving a section and each slit is provided with cavities (44) on both sides within the interior of a part for receiving the protrusions (46) of said section for securing the hinge (36) in said part.
- 30
14. Portable electronic device according to any previous claim, wherein a set of flexible electrical conductors is provided in the form of a flex film.
- 35
15. Portable electronic device according to any of claims 1 - 12, wherein a set of flexible electrical conductors is provided as a cable comprising a number of wires.
16. Portable electronic device according to any previous claim, wherein the first part (12) includes an image captioning unit having a lens (48) on the interior side (24) and the second part (14) includes a display (28) provided on the interior side (22).

17. Portable electronic device according to any previous claim, wherein the device is a cellular phone.

18. Portable electronic device (10) comprising:

5 a first part (12) including electrical circuits and having an exterior side (30), an interior side (24), and top and bottom (20) sides,

a second part (14) also including electrical circuits and also having an exterior side (16), an interior side (22) and top and bottom (18) sides, and

10 at least one hinge (36) connecting the bottom sides of the first and second parts to each other and allowing rotation of one part in relation to the other with at least approximately 270 degrees,

wherein the first part (12) comprises an image captioning unit having a lens (48) on the interior side and the second part (14) comprises a display (28) provided on the interior side.

15 19. Portable communication device according to claim 18, wherein the hinge allows rotation of one part in relation to the other with approximately 360 degrees.

20 20. Portable communication device according to claim 18 or 19, wherein at least one first set (32, 34) of flexible electrical conductors are connected between the first part and the second part for providing electrical connection between electrical circuits of the first and second parts.